## **PATENT COOPERATION TREATY**

# **PCT**

## INTERNATIONAL PRELIMINARY REPORTON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference  | FOR FURTHER ACT   | ION                   | See Form PCT/IPEA/416                                     |                     |  |
|--|---|-----------------------|---|---------------------|--|
| R-16   | 1 SKI SKIIMEKACI  |                       |   |                     |  |
| International application No.  | International filing date (a  | lay/month/year)       | Priority date (day/month                                  | /year)              |  |
| PCT/JP 03 / 13523  | 23.10   | .2003                 | 30.10.  | 2002                |  |
| International Patent Classification (IPC) of   |   | nd IPC                |   |                     |  |
| Int.Cl 7 B21D 53/04, B21   | LD 53/08  |                       |   |                     |  |
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|  |   |                       |   |                     |  |
| Applicant  |   |                       |   |                     |  |
| SHOWA DENKO K.K.   |   |                       |   |                     |  |
| 1. This report is the international p  | reliminary examination r  | enort, established by | this International Prelim                                 | inary Evamining     |  |
| Authority under Article 35 and tr  | ansmitted to the applicant  | according to Article  | 36.   | mary Examining      |  |
| 2. This REPORT consists of a total   |   | _                     | neet.   |                     |  |
| 3. This report is also accompanied b   | y ANNEXES, comprising   | g:                    |   |                     |  |
| a. a total of  | sheets, as follows:   | •                     |   |                     |  |
| sheets of the de   | scription, claims and/or di   | rawings which have b  | een amended and are the b                                 | asis of this report |  |
| and/or sheets co<br>Administrative   |   | thorized by this Auth | ority (see Rule 70.16 and S                               | Section 607 of the  |  |
|  | •   | t which this Authorit | y considers contain an ame                                |                     |  |
|  |   |                       | as indicated in item 4 of Bo                              |                     |  |
| Supplemental E   | Box.  | •                     |   | *                   |  |
|  | and number of electronic  |                       |   | ,                   |  |
|  |   |                       | iter readable form only, as<br>he Administrative Instruct |                     |  |
|  |   | ·                     |   |                     |  |
| 4. This report contains indications re   | elating to the following ite  | ems:                  |   |                     |  |
| Box No. I Basis of the   | e report  |                       |   |                     |  |
| Box No. II Priority  | у   |                       |   |                     |  |
| Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |   |                       |   |                     |  |
| Box No. IV Lack of unity of invention  |   |                       |   |                     |  |
| Box No. V Reasoned st<br>citations an  | oned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; one and explanations supporting such statement |                       |   |                     |  |
| Box No. VI Certain doc   | Box No. VI Certain documents cited  |                       |   |                     |  |
| Box No. VII Certain def  | in defects in the international application   |                       |   |                     |  |
| Box No. VIII Certain obs   | ervations on the internation  | onal application      |   |                     |  |
| Data of submission - Cal- 31   |   | D                     | 2.1.  |                     |  |
| Date of submission of the demand   |   | Date of completion    | of this report  |                     |  |
| 01.03.200  | 4   |                       | 26.11.2004  |                     |  |
| Name and mailing address of the IPEA/JP  |   | Authorized officer    | <del></del>   | 20 0005             |  |
| Japan Patent Office  |   | KAWAMURA              | Kenichi   | 3P 9625             |  |
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Form PCT/IPEA/409 (cover sheet) (January 2004)

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03 /13523

| DOX IVO. I | Basis of the report   |  |                                   |
|------------|---|--|-----------------------------------|
|            | regard to the language, this report is based on the in  | nternational application in the language | ge in which it was filed, unless  |
| other      | wise indicated under this item.   |  | ·                                 |
|            | This report is based on translations from the origin  |  | age,                              |
|            | which is the language of a translation furnished for  | •  |                                   |
|            | international search (under Rules 12.3 and 23.  | l(b))                                    |                                   |
|            | publication of the international application (un  | •  |                                   |
|            | international preliminary examination (under I  | Rules 55.2 and/or 55.3)                  |                                   |
|            |   |  |                                   |
|            | regard to the elements of the international applica   |  |                                   |
|            | shed to the receiving Office in response to an invitation   | on under Article 14 are referred to in   | this report as "originally filed" |
| and a      | re not annexed to this report):   |  |                                   |
|            | the international application as originally filed/fur   | mished                                   |                                   |
|            | the description:  |  |                                   |
|            | pages   |  | as originally filed/furnished     |
|            | pages*  |  |                                   |
|            | pages*  |  |                                   |
| ·          |   |  |                                   |
|            | the claims:   |  |                                   |
|            | pages   |  | as originally filed/furnished     |
|            | pages*  |  | -                                 |
|            | pages*  |  |                                   |
|            | pages*  | received by this Authority on            |                                   |
|            | the drawings:   |  |                                   |
|            |   |  | as originally filed/firmished     |
|            | pages*  |  |                                   |
|            | pages*  |  |                                   |
|            | Pw200   |  |                                   |
|            | a sequence listing and/or any related table(s) - see  | Supplemental Box Relating to Sequ        | ence Listing.                     |
|            |   | · · · · · ·                              |                                   |
| 3. 🗆       | The amendments have resulted in the cancellation  | of:                                      |                                   |
| J. ∐       |   | ot.                                      |                                   |
|            | the description, pages  |  |                                   |
|            | the claims, Nos.  |  |                                   |
|            | the drawings, sheets/figs   |  | <del></del>                       |
|            | the sequence listing (specify):   |  |                                   |
|            | any table(s) related to sequence listing (specif  |  |                                   |
| <b>⊿</b> □ | This report has been established as if (same 10.4)  | o amondments amound to this are a        | and listed below had not be       |
| 4.         | This report has been established as if (some of) th made, since they have been considered to go bey (Rule 70.2(c)). |  |                                   |
|            | the description, pages  |  |                                   |
|            | the claims, Nos.  |  |                                   |
|            | the drawings, sheets/figs   |  |                                   |
| •          | the sequence listing (specify):   |  |                                   |
|            | any table(s) related to sequence listing (specif  |  |                                   |
| * If itam  | 4 applies, some or all of those sheets may be marked  |  | <del> </del>                      |
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#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/JP03 /13523

| Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |        |              |     |  |
|---|--------|--------------|-----|--|
| 1. Statement  |        |              |     |  |
| Novelty (N)   | Claims | 15-24, 26-28 | YES |  |
|   | Claims | 1-14, 25     | NO  |  |
| Inventive step (IS)   | Claims | 15-24        | YES |  |
|   | Claims | 1-14, 25-28  | NO  |  |
| Industrial applicability (IA)   | Claims | 1-28         | YES |  |
|   | Claims |              | NO  |  |

#### 2. Citations and explanations (Rule 70.7)

Document JP 5-177286 A which was cited in the ISR discloses a semifinished flat tube comprising a pair of flat walls opposed to each other, and two side walls interconnecting the flat walls at opposite side edges thereof for use in producing a flat tube, a flat tube comprising a semifinished flat tube and a heat exchanger comprising a pair of headers.

Document EP 704667 A2 which was cited in the ISR discloses a heat exchanger and a process for fabricating a heat exchanger.

Document JP 10-132479 A which was cited in the ISR discloses a vehicle comprising a refrigeration cycle having a compressor, a condenser and an evaporator.

Claims 1-14 and 25 lack novelty under PCT Article 33(2) because the claimed subject matters are anticipated by the reference to JP 5-177286 A.

Claim 26 lacks inventive step under PCT Article 33(3) because the claimed matters are taught by the reference to JP 5-177286 A and EP 704667 A2.

Claim 27 lacks inventive step under PCT Article 33(3) because the claimed matters are taught by the reference to JP 5-177286 A and EP 704667 A2.

Claim 28 lacks inventive step under PCT Article 33(3) because the claimed matters are taught by the reference to JP 5-177286 A, EP 704667 A2 and JP 10-132479 A.